REMARKS

Claims 1-21 are pending in the present application. In the Office Action mailed June 28, 2005, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by Pelc et al. (US Patent Application Publication 2003/0123612). The Examiner next rejected claims 2-5 under 35 U.S.C. §103(a) as being unpatentable over Pelc et al., and further in view of Wen (USP 6,798,118). Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. and Wen, and further in view of Wirth et al. (USP 5,339,348). Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. and Wen, and further in view of Grady (USP 4,162,420). Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. and further in view of Burl et al. (USP 6,211,677). Claims 10 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al., Mistretta et al. (USP 5,873,825), and Burl et al. Claim 12 was rejected under 35 U.SC. §103(a) as being unpatentable over Pelc et al., Mistretta et al., and Wen, and further in view of Bavor (USP 3,456,175). Claims 13-15 were rejected un er 35 U.S.C. §103(a) as being unpatentable over Pelc et al., Mistretta et al., and Wen, and further in view of Grady. Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. in view of Dorri et al. (USP 5,574,417). Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. and Dorri et al., and further in view of Wirth et al. Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al., Dorri et al., and Wirth et al., and further in view of Tran-Quang (USP 3,942,059). Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al. and Dorri et al., and further in view of Grady. Claims 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pelc et al., Dorri et al., and Grady, and further in view of Wen.

Paragraph 31 as well as claim 1 have been amended to address the objections raised by the Examiner.

Claim 1 has been amended to incorporate the subject matter of claim 8. Claim 8 was rejected as being unpatentable over Pelc et al. and Wen, and further in view of Grady. The Examiner acknowledged that Pelc et al. "does not disclose a biasing spring operationally connected to an anode such that rotation of the anode biases the spring in a stored energy condition, and wherein the spring is further configured to rotate the anode when the bias placed on the spring is removed." Office Action, June 28, 2005, p. 5. As such, the Examiner relied upon Grady for its teaching of "a biasing spring (fig. 1, #25) operationally connected to an anode (fig. 1, #30) such that rotation of the anode (fig. 1, #30) biases the spring (fig. 1, #25) in a stored

energy condition (col.3, lines 5-8), and wherein the spring (fig. 1, #25) is further configured to rotate the anode (fig. 1, #30) when the bias placed on the spring (fig. 1, #25) is removed (col. 3, lines 5-8)" to support a conclusion that it would have been obvious "to incorporate the system of Pelc et al. as modified above with the spring of Grady…" Id.

Contrary to the conclusion of the Examiner, Grady does not teach a biasing spring as claimed. Grady teaches "a pair of springs 24 and 25 [that] are disposed over rods 18 and 19 and each biases at one end against a respective end cap." Col. 3, ll. 3-5. In this regard, "the other ends of the springs bias against the shaft 10 and the bearing surface 22 respectively so as to constantly urge the shaft 10 toward the rest position shown." Col. 3, ll. 5-8. However, the springs do not bias the shaft in a stored energy position. In fact, Grady teaches an induction motor to cause rotation of the shaft during data acquisition, which is consistent with known x-ray tube assemblies.

Specifically, Grady teaches that "disc 30 is rotated on axis 40 with shaft 10 by means of a stator or inductive winding 29 which is located in an externally encircling relation to rotor 16." Col. 3, ll. 17-20. Thus, "Inductive winding 29 can cause disc 30 to rotate at speeds of 10,000 to 20,000 revolutions per minute to constantly present different surfaces to the flow of electrons from source 31 instead of bombarding a single immovable focal spot area." Col. 3, ll. 20-25. Thus, it is clear that the inductive winding causes constant rotation of the disc during data acquisition not the releasing of stored energy of a spring, as presently claimed.

Additionally, Grady discloses that "when rotor 6 is started by applying current to inductive winding 29, an initial force will be applied to the rotatable members which combines a gyroscopic recessional force and an electromotive force that rotates the shaft and shifts it at right angles to the winding 34 to cause it to move axially on rods 18 and 19." Col. 3, ll. 35-41. In this regard, "the first axial thrust of the armature compresses one spring nearly fully" and "the springs then cooperatively reciprocate the rotor and the disc attached thereto with an oscillatory motion." Col. 3, ll. 41-44. Thus, contrary to the assertions of the Examiner, the springs of Grady do not operate to store rotational energy, as presently claimed. The springs of Grady are used to created a reciprocating motion of the anode disc "thereby avoiding a replication of the track of the focal spot and reducing the concentration of heat." Col. 3, ll. 51-52.

Accordingly, it is believed that claims 1, 3-6, and 9 are in condition for allowance.

Claim 10 has been amended to incorporate the subject matter of claim 12. Claim 12 was rejected as being unpatentable over the combination of Pelc et al., Mistretta et al., Wen, and Bavor.

As acknowledged by the Examiner, Pelc et al. does not disclose not rotating an anode during data acquisition. Moreover, neither Pelc et al. nor any of the other references relied upon by the Examiner teach a radial flux motor configured to rotate a rotatable anode prior to a pre-data acquisition rotational speed and disengage from the rotatable anode during a simultaneous acquisition of radiographic and MR data such that the rotatable anode rotates during the simultaneous acquisition of radiographic and MR data as a result of momentum generated in the rotatable anode before the simultaneous acquisition of radiographic and MR data, as presently called for in claim 10.

Bavor teaches a braking system for intermittently braking rotation of an anode disk "upon completion of an exposure." That is, "upon completion of an exposure and release of the push button PB, starting signal power is removed from source SC1 by way of the connections to the motor control 26, allowing relay coil C1 to drop out after a short delay controlled by its shunt capacitor CP1." Col. 4, ll. 26-30. As a result of subsequent electronic switching, "braking power is thus applied to the motor 24 until the time delay of relay coil C2 expires..." Col. 4, ll. 52-54. Thus, Bavor is clear that braking of the anode disc occurs after a full exposure has been taken. One skilled in the art will readily recognize that this teaching of Bavor illustrates that the reference discloses a control technique whereby an anode disc is motor driven during data acquisition and, after data acquisition, braking is applied to the anode disc.

In contrast, claim 10 calls for, in part, driving the anode to a pre-data acquisition rotational speed and then removing the drive force <u>followed by the acquisition of MR and radiographic data</u>. Thus, data acquisition does not occur until after the driving force is removed. It is therefore believed that claim 10 is directed to subject matter neither taught nor suggested by the art of record. Allowance of claims 10-11 is requested.

Claim 16 has been amended to incorporate the subject matter of claim 19. Claim 19 was rejected based on the combination of Pelc et al., Dorri et al., and Grady. As set forth above, Grady does not teach the storing of rotational energy in a spring and releasing that energy to rotate an anode disc during data acquisition. As such, notwithstanding the teachings of Pelc et al. and Dorri et al., claims 16, 18, and 20 are believed to be in condition for allowance.

Applicant requests entry and consideration of claims 22-23 newly presented herein. Claims 2, 7-8, 12-15, 17, 19, and 21 have been canceled.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 3-6, 9-11, 16, 18, 20, 22 and 23.

Applicant hereby authorizes charging of deposit account no. 07-0845 for any additional fees associated with entering the aforementioned claims.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

J. Mark Wilkinson
Registration No. 48,865
Direct Dial 262-376-5016
jmw@zpspatents.com

Dated: July 18, 2005
Attorney Docket No.: GEMS8081.185

P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
14135 North Cedarburg Road
Mequon, WI 53097-1416
262-376-5170